

Date: Thursday, 5/10/2007 2:35:57 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : CROSSTUBE EXTRUSION (412 AFT)
Job Number : 32306	
Estirfiate Number : 10030	
P.O. Number : <i>N/A</i>	Part Number : D6009129
This Issue : 5/10/2007 S.O. No. : <i>N/A</i>	Drawing Number : D6009 REV A
Prsht Rev. : NC	Project Number : N/A
First Issue : <i>N/A</i> Type : LANDING GEAR	Drawing Revision : A
Previous Run : 29111	Material : <i>N/A</i>
Written By : _____	Due Date : 10/30/2007
Checked & Approved By : <i>07.05.10</i>	Qty: <i>26</i> Um: Each
Comment : Est Rev: A 01.08.17 New Issue SM	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: *3761**C/L 7/10/5/20**(24)*

a) Order as per Dwg D6009

b) Material: 3.500 x 0.625 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube

c) Minimum ultimate tensile strength = 77 ksi

d) Minimum tensile yield strength = 66 ksi

e) Tolerance are per ASTM B210 (see details on Dwg D6009)

f) Material certification required

2.0

D6009129P

Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total : 24.0000 Each(s)  
 Crosstube Material

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material certification is attached

*7/12/10 sc**(26x)*

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D

*JF 07/12/11**(26)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: RD Date: 07/12/12  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CROSSTUBE EXTRUSION (412 AFT)

Job Number: 32306

Part Number: D6009129

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAND FINISHING 1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

N/A

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *CRC*

*J. M.* (26)

7.0

QC21

FINAL INSPECTION/W/O RELEASE



(26)

Comment: FINAL INSPECTION/W/O RELEASE

*Don't 12/12*

Job Completion



*U 07.12.12*

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

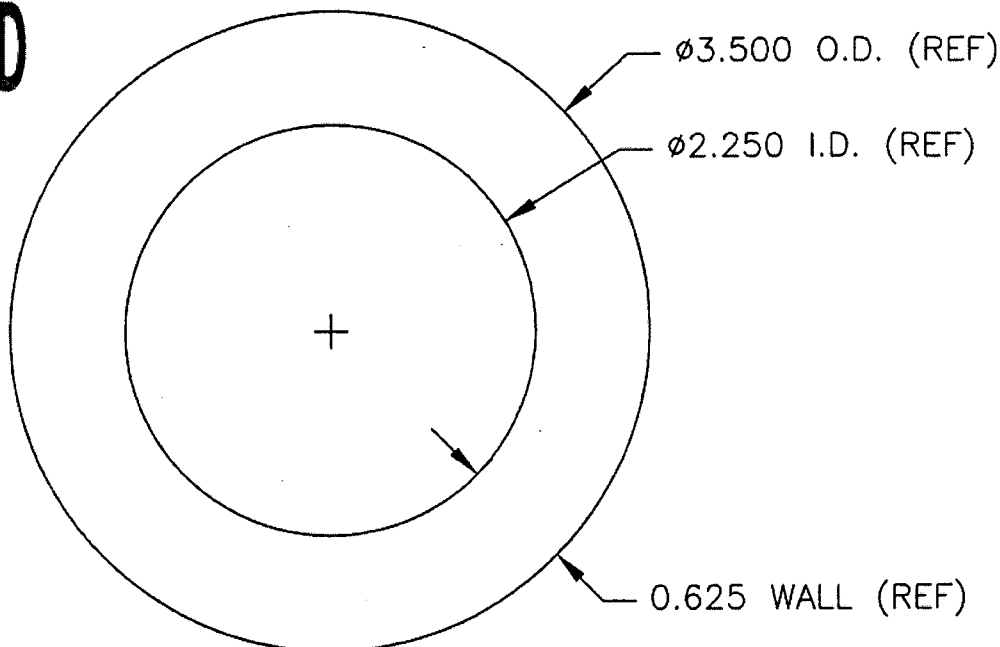
NOTE: Date & initial all entries



DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6009	REV. A SHEET 1 OF 1
DATE 01.08.16		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	01.08.16	NEW ISSUE	

## SPECIFICATION CONTROL DRAWING

RELEASED  
01.08.17



### NOTES

- 1) D6009-XXX CROSSTUBE  
LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 129" LONG TUBE: D6009-129

- 2) MATERIAL: 3.500 OD x 0.625 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.  
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi  
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:  
O.D.:  $\pm 0.008$  MEAN ( $\pm 0.016$  INCLUDING OVALITY)  
WALL:  $\pm 0.020$  MEAN ( $\pm 0.063$  INCLUDING ECCENTRICITY)  
LENGTH: XXX  $+0.188/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 32306

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## Packinglist ALUnna AG

<b>Customer PO</b>	<b>Po. 00003761</b>
<b>ALUnna ref. no.</b>	<b>25006/5</b>
<b>Date:</b>	<b>11.12.07</b>

**Boxmarking:**

Dart Aerospace PO. 00003761 D 6009-129
Made in Germany
Dest. Hawkesbury Ont. Canada

**We hereby declare that the wooden packing material are totally free from bark and apparently**

**free from live plant pests**

[illegible]



ALUnna

**Abnahmeprüfzeugnis 3.1 - EN 10204:2004****Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1 - EN 10204:2004****Kunde:** Dart Aerospace Ltd.**Zeugnisnummer:** 1255/07**Client:****Cert No. / No. du certificat:**1270 Aberdeen Street  
K6A1K7 Hawkesbury, ON Canada**Bestellnummer:** PO00003761**Order No. / No. de commande****Produkt:** Rohre nahtlos gepresst**Auftrag:** 25006/5**Product / Produit:** Tubes seamless extruded**Our Reference/Notre Reference:****Spezifikation:** AMS - QQ - A - 200/11E; Spezifikation Dart Aerospace D6009**Specification:****Werkstoff:** 7075**Zustand:** T 6511**Alloy/Alliage:****Temper/État****Abmessung:** 3,500 INCH x 2,250 INCH x 0,625 INCH x 129,000 INCH**Size / Dimension:** D6009-129 3.500 X 0.625 X 129**Kennzeichnung:** ALUnna - Cert No. 1255/07 - 7075 - T 6511 - Cast No. 01706078 - AMS - QQA 200/11 - 3.500" OD X 0.625" Wall -  
**Marking/Marquage:** Heat No. 951 - Lot 25006/5-1 PO. 00003761**Lieferung:** pcs. lbs**Country of Manufacture: Germany****Delivered Material / Matériel délivré:** 26 1925**1. Chemische Analyse** **Chemical Analysis / analyse chimique**

		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ min.				1,2		2,1	0,18	5,1						
Cast No. max.		0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
01706078		0,1	0,28	1,55	0,04	2,47	0,19	5,74	0,03	0	0,01			0

**Hydrogen content:** <0,15**ccm/100 g Al** Elements without indication < 0,01 %**country of melt manufacturer:** Germany**2. Mechanische Eigenschaften** **Mechanical Properties / Valeurs Mécaniques**

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min. max.	77,0	66,0				
1	84,100	77,720	10,0			951 - 26 pcs.
2	84,825	78,590	11,0			
3	84,970	79,170	11,0			

RMS: outside 25 - max. 15,6 µ"

**Ergebnis der  
Prüfungen:**

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

**Test results:**

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

**Resultats:**

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

azbqs\_netz

Certified acc. to DIN EN ISO 9001:2000, valid until 2009-03-27  
Certificate No.: 001959 QM

12.11.2007

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

Abnahmebeauftragter